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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,952	06/04/2002	Hildegard Romer	WEI0035	2568

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John F Hoffman
Baker & Daniels
Suite 800
111 East Wayne Street
Fort Wayne, IN 46802

EXAMINER

HALPERN, MARK

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/049,952	Applicant(s) ROMER ET AL.	
	Examiner Mark Halpern	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/4/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 1) Claims 1-14, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the crystallised base layer" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 1: the spelling of word "crystallised" should be corrected to "crystallized".

Claim 4 recites the limitation "the upper area of the sleeve" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2) Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Sobolev (6,058,741). Sobolev discloses a cooled induction melter 20 constructed of a housing 21, sidewalls 22 and a bottom 23 made of metal pipes, wherein said metal pipes are separated from each other by gap 24. The metal pipes are combined by a collector 25 for supplying and discharging a coolant medium to the metal pipes. An inductor 35 is positioned to concentrically encompass the sidewalls 22. An aperture for disposal of the discharge 1 of the melt inside the melter is made in the bottom 23 of the housing directly adjacent to the wall 21. The discharge is a cylinder (or a sleeve) with a jacket 3 having its inlet end raised to level 4, above the bottom of the induction melter (col. 6, line 34 to col. 7, line 29, col. 10, lines 19-24, and Figure 5). The limitation that the melt can be removed through the crystallized base layer is a method and not a structural limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev. Sobolev is applied as above for claim 1, Sobolev does not disclose that the upper edge of the sleeve is at a height of between a tenth to a half of the melt height measured from the base of the crucible. It would have been obvious to one skilled in the art at the time the invention was made, that the height of the sleeve in relation to the melt height be of any height including the claimed height depending on the quantity of glass being melted.

4) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Ladirat (5,567,218). Sobolev is applied as above for claim 2, Sobolev does not disclose that the sleeve is assigned a device for adjusting or regulating its temperature. Ladirat discloses in Figure 1b a melting furnace having a sleeve extending into the melt and wherein the sleeve is heated by a lateral electric heater 10 located in a double walled enclosure (Ladirat, col. 1, lines 25-33). It would have been obvious to one skilled in the art at the time the invention was made, to combine the teachings of Sobolev and Ladirat because such a combination would provide for a means of regulating the temperature of discharging melt in the design of Sobolev.

5) Claims 4, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Ladirat and further in view of Boen (5,367,532). Sobolev in view of Ladirat is applied as above for claim 3, Sobolev in view of Ladirat does not disclose that the upper area of the sleeve has an inlet and an outlet for a coolant. Boen discloses an induction furnace for melting of oxides. As shown in Figure 2 of Boen, the furnace includes discharge nozzle 15 which extends into the melt and is double walled and

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forms a cavity for an inlet and outlet of a cooling medium. It would have been obvious to one skilled in the art at the time the invention was made, to combine the teachings of Sobolev and Ladirat with Boen because such a combination would provide for a means of regulating the temperature of discharging melt in the design of Sobolev.

Allowable Subject Matter

6) Claims 5-6, 8-14, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter is that the cited prior art does not show a skull crucible having: a sleeve of two coaxial sleeves, the outer sleeve being a metal jacket and the inner sleeve being a quartz glass tube (claims 5, 8-10); a sleeve that is height-adjustable (claims 6, 11-13);

Conclusion

7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 571-272-1190. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH

Mark Halpern
Patent Examiner
Art Unit 1731


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700